

Roofers

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Significant Points

- Most roofers acquire their skills informally on the job; some roofers train through 3-year apprenticeship programs.
- Jobs for roofers should be plentiful because the work is hot, strenuous, and dirty, resulting in higher job turnover than in most construction trades.
- Demand for roofers is less susceptible to downturns in the economy than demand for other construction trades because most roofing work consists of repair and reroofing.

Nature of the Work

A leaky roof can damage ceilings, walls, and furnishings. To protect buildings and their contents from water damage, roofers repair and install roofs made of tar or asphalt and gravel; rubber or thermoplastic; metal; or shingles made of asphalt, slate, fiberglass, wood, tile, or other material. Repair and reroofing—replacing old roofs on existing buildings—provide many job opportunities for these workers. Roofers also may waterproof foundation walls and floors.

There are two types of roofs—flat and pitched (sloped). Most commercial, industrial, and apartment buildings have flat or slightly sloping roofs. Most houses have pitched roofs. Some roofers work on both types; others specialize.

Most flat roofs are covered with several layers of materials. Roofers first put a layer of insulation on the roof deck. Over the insulation, they then spread a coat of molten bitumen, a tarlike substance. Next, they install partially overlapping layers of roofing felt—a fabric saturated in bitumen—over the surface. Roofers use a mop to spread hot bitumen over the surface and under the next layer. This seals the seams and makes the surface watertight. Roofers repeat these steps to build up the desired number of layers, called “plies.” The top layer either is glazed to make a smooth finish or has gravel embedded in the hot bitumen to create a rough surface.

An increasing number of flat roofs are covered with a single-ply membrane of waterproof rubber or thermoplastic compounds. Roofers roll these sheets over the roof’s insulation and seal the seams. Adhesive, mechanical fasteners, or stone ballast hold the sheets in place. The building must be of sufficient strength to hold the ballast.

Most residential roofs are covered with shingles. To apply shingles, roofers first lay, cut, and tack 3-foot strips of roofing felt lengthwise over the entire roof. Then, starting from the bottom edge, they staple or nail overlapping rows of shingles to the roof. Workers measure and cut the felt and shingles to fit intersecting roof surfaces and to fit around vent pipes and chimneys. Wherever two roof surfaces intersect, or shingles reach a vent pipe or chimney, roofers cement or nail flashing-strips of metal or shingle over the joints to make them watertight. Finally, roofers cover exposed nailheads with roofing cement or caulking to prevent water leakage. Roofers who use tile, metal shingles, or shakes follow a similar process.

Some roofers also waterproof and dampproof masonry and concrete walls and floors. To prepare surfaces for waterproofing, they hammer and chisel away rough spots, or remove them with a rubbing brick, before applying a coat of liquid waterproofing compound. They also may paint or spray surfaces with a waterproofing

material, or attach waterproofing membrane to surfaces. When dampproofing, they usually spray a bitumen-based coating on interior or exterior surfaces.

Working Conditions

Roofing work is strenuous. It involves heavy lifting, as well as climbing, bending, and kneeling. Roofers work outdoors in all types of weather, particularly when making repairs. These workers risk slips or falls from scaffolds, ladders, or roofs, or burns from hot bitumen. In addition, roofs become extremely hot during the summer.

Employment

Roofers held about 166,000 jobs in 2002. Almost all wage and salary roofers worked for roofing contractors. About 1 out of every 3 roofers was self-employed. Many self-employed roofers specialized in residential work.

Training, Other Qualifications, and Advancement

Most roofers acquire their skills informally by working as helpers for experienced roofers. Safety training is increasing to reduce the number of accidents on the job and is one of the first classes that a worker takes. Trainees start by carrying equipment and material, and erecting scaffolds and hoists. Within 2 or 3 months, trainees are taught to measure, cut, and fit roofing materials and, later, to lay asphalt or fiberglass shingles. Because some roofing materials are used infrequently, it can take several years to get experience working on all the various types of roofing applications.

Some roofers train through 3-year apprenticeship programs administered by local union-management committees representing roofing contractors and locals of the United Union of Roofers, Waterproofers, and Allied Workers. The apprenticeship program generally consists of a minimum of 2,000 hours of on-the-job training annually, plus a minimum of 144 hours of classroom instruction a year in subjects such as tools and their use, arithmetic, and safety. On-the-job training for apprentices is similar to that for helpers, except that the apprenticeship program is more structured. Apprentices also learn to dampproof and waterproof walls.

Good physical condition and good balance are essential for roofers. A high school education, or its equivalent, is helpful, as are courses in mechanical drawing and basic mathematics. Most apprentices are at least 18 years old. Experience with metal-working is helpful for workers who install metal roofing.



About 1 out of every 3 roofers is self-employed.

Roofers may advance to supervisor or estimator for a roofing contractor, or become contractors themselves.

Job Outlook

Jobs for roofers should be plentiful through the year 2012, primarily because of the need to replace workers who transfer to other occupations or leave the labor force. Turnover is higher than in most construction trades—roofing work is hot, strenuous, and dirty, and a significant number of workers treat roofing as a temporary job until something better comes along. Some roofers leave the occupation to go into other construction trades.

Employment of roofers is expected to grow as fast as the average for all occupations through the year 2012. Roofs deteriorate faster and are more susceptible to weather damage than most other parts of buildings and periodically need to be repaired or replaced. Roofing has a much higher proportion of repair and replacement work than most other construction occupations. As a result, demand for roofers is less susceptible to downturns in the economy than demand for other construction trades. In addition to repair and reroofing work on the growing stock of buildings, new construction of industrial, commercial, and residential buildings will add to the demand for roofers. Jobs should be easiest to find during spring and summer when most roofing is done.

Earnings

In 2002, median hourly earnings of roofers were \$14.51. The middle 50 percent earned between \$11.23 and \$19.56. The lowest 10 percent earned less than \$9.15, and the highest 10 percent earned more than \$25.35. The median hourly earnings of roofers in the foundation, structure, and building exterior contractors industry were \$14.57 in 2002.

Apprentices usually start at about 40 percent to 50 percent of the rate paid to experienced roofers and receive periodic raises as they acquire the skills of the trade. Earnings for roofers are reduced on occasion because poor weather often limits the time they can work.

Some roofers are members of the United Union of Roofers, Waterproofers, and Allied Workers.

Related Occupations

Roofers use shingles, bitumen and gravel, single-ply plastic or rubber sheets, or other materials to waterproof building surfaces. Workers in other occupations who cover surfaces with special materials for protection and decoration include carpenters; carpet, floor, and tile installers and finishers; cement masons, concrete finishers, segmental pavers, and terrazzo workers; drywall installers, ceiling tile installers, and tapers; and plasterers and stucco masons.

Sources of Additional Information

For information about apprenticeships or job opportunities in roofing, contact local roofing contractors, a local chapter of the roofers union, a local joint union-management apprenticeship committee, or the nearest office of your State employment service or apprenticeship agency.

For information about the work of roofers, contact:

- National Roofing Contractors Association, 10255 W. Higgins Rd., Suite 600, Rosemont, IL 60018-5607. Internet: <http://www.nrca.net>
- United Union of Roofers, Waterproofers, and Allied Workers, 1660 L St. NW., Suite 800, Washington, DC 20036. Internet: <http://www.unionroofers.org>

There are more than 500 occupations registered by the U.S. Department of Labor's National Apprenticeship system. For more in-

formation on the Labor Department's registered apprenticeship system and links to State apprenticeship programs, check their website: <http://www.doleta.gov>